



TETRA TECH

David Franc
Project Manager

November 3, 2014

Ms. Jan Pels
Targeted Brownfields Assessment Quality Assurance Reviewer
U.S. Environmental Protection Agency Region 5
77 W. Jackson Blvd. – Mail Code SB-7J
Chicago, Illinois 60604

**Subject: Highland Park Model T Site – Highland Park, Wayne County, Michigan
Site-Specific Quality Assurance Project Plan Addendum
EPA Contract No. EP-S5-13-01
Technical Direction Document No. 0003/S05-0003-1407-014
Document Tracking No. 0078
ACRES ID No. 177064**

Dear Ms. Pels:

This letter serves as the site-specific Quality Assurance Project Plan (QAPP) Addendum for the Highland Park Model T site (Site). All field work for this project will be conducted according to the originally approved QAPP and the Swayze Apartments site-specific QAPP Addendum, with the additional specifics noted in this QAPP Addendum. This Addendum updates (1) the original QAPP prepared by Tetra Tech, Inc., (Tetra Tech) for the Targeted Brownfields Assessment project, approved by the U.S. Environmental Protection Agency (EPA) on July 15, 2014. The Swayze Apartments site-specific QAPP Addendum was approved by EPA on October 6, 2014.

This QAPP Addendum adds the following information regarding the Highland Park Model T site: site background, recognized environmental conditions (REC), subcontractor information (including resumes and organizational charts), sample collection requirements, and project-specific field SOPs. A sampling and analysis plan (SAP) will also be prepared and submitted under separate cover. The SAP will include additional details on the sampling and analysis approach, including specific sampling locations, quantities, and descriptions of sampling procedures.

Facility History/Background Information: The Site is at 14534 Woodward Avenue (also known as 15000 Woodward Avenue) in Highland Park, Wayne County, Michigan. In April 2001, AKT prepared a Phase I Environmental Site Assessment (ESA). The Phase I ESA identified the following recognized environmental conditions (REC) at the Site:

- Railway spurs transected the northern and southern portions of the Site. Industrial activities were historically conducted on the northern and southern portions of the Site.

- The eastern adjoining structure was formerly used as an automotive repair garage. The nearby structure attached to the eastern side of the former automotive repair garage was formerly used as a machine shop.
- Two steel pipes were observed approximately 15 feet north of the Site building.

To confirm or eliminate the Phase I ESA RECs, AKT performed a Phase II ESA in September 2002. AKT completed 10 borings, collected 22 soil samples, and collected 1 groundwater sample. Soil samples were submitted for analyses that included volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PNA), Michigan metals, creosote, and polychlorinated biphenyls (PCB). The groundwater sample was submitted for analyses for VOCs, PNAs, and Michigan metals. No VOCs, PCBs, or creosote concentrations were detected above Generic Residential Cleanup Criteria (GRCC). The PNAs benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a,h)anthracene, and ideno(1,2,3-cd)pyrene were detected in one sample (B-5) at concentrations above the respective GRCCs for soil direct contact (DC). The benzo(a)pyrene concentration also exceeded the Generic Non-Residential Cleanup Criterion (GNCC). Arsenic was detected at three locations (B-1, B-2, and B-5) at concentrations above the GRCC for soil DC. Lead was detected at one location (B-1) at a concentration above the GRCC for soil DC. AKT also discovered an underground storage tank (UST) in the vicinity of the two steel pipes. The fill port was opened, and based on odor and size, the tank was estimated to be a 6,000- to 8,000-gallon gasoline UST.

In August 2013, ASTI Environmental (ASTI) conducted an additional Phase I ESA of the Site. ASTI identified the following RECs:

- The Property is listed as an open LUST site in regard to removal of one 5,000-gallon gasoline and three 550-gallon USTs with unknown contents. A release was reported in February 2003. One verification sample contained lead at 1,100,000 micrograms per kilogram ($\mu\text{g/kg}$), which exceeds the non-residential and residential screening levels for soil DC.
- Results of a 2002 Phase II ESA reported levels of PNAs and the metals arsenic and lead in excess of the residential screening levels at several locations on the Property. Benzo(a)pyrene was detected at a concentration exceeding its non-residential screening level. It is likely that the area containing PNAs above screening levels was removed as part of an UST excavation.
- Historical use of the Property included operations of The Braun Lumber Co., H.W. Harding Lumber Co., and United Fuel & Supply; railroad spurs; and suspected auto repair in the former executive garage.

To further investigate the RECs identified during the August 2013 Phase I ESA, ASTI performed a subsurface investigation at the Site in October 2013. The investigation included advancement of eight soil borings in areas where RECs had been identified. Arsenic was detected at concentrations exceeding the DC criterion in samples collected at two locations.

In February 2014, ASTI completed a Phase I ESA update of the Site. The Phase I ESA update documented the following RECs:

- The Property is listed as an open LUST site in regard to removal of one 5,000-gallon gasoline and three 550-gallon USTs with unknown contents. A release was reported in February 2003.

One verification sample contained lead at 1,100,000, which exceeds the non-residential and residential screening levels for soil DC.

- Results of a 2002 Phase II ESA reported levels of PNAs and the metals arsenic and lead in excess of the residential screening levels at several locations on the Property. It is likely that the area containing PNAs above residential screening levels was removed as part of an UST excavation.
- Historical use of the Property included operations of The Braun Lumber Co., H.W. Harding Lumber Co., and United Fuel & Supply; railroad spurs; and suspected auto repair in the former executive garage.
- Arsenic was detected at two locations exceeding the Part 201 residential DC criterion during ASTI's 2013 subsurface investigation.

Based on detections at the Site of arsenic, lead, and PNA concentrations above applicable GRCCs, the Property is a "facility" as defined in Part 201 of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended (Part 201). Therefore, ASTI prepared a Baseline Environmental Assessment (BEA) in March 2014 pursuant to Section 20126(1)(c) of 1994 PA 451, Part 201, as amended.

Based on Tetra Tech's review of the existing documentation and the proposed future use of the Site (non-residential welcome and learning center), additional investigation is necessary. Soil sampling to help achieve LUST closure and Due Care Plan requirements is proposed in the SAP. Given the RECs listed above and historical property uses, the contaminants of concern (COC) for the Site are PNAs, arsenic, and lead. A hazardous materials survey (including asbestos-containing materials [ACM] and lead-based paint [LBP] investigations) is also proposed as part of the SAP to support the Due Care Plan and establish cleanup options and cost estimates based on future uses and redevelopment plans. Part of the LBP investigation will involve use of an x-ray fluorescence spectrometer to measure levels of lead in paint.

Project Staff: Tetra Tech will subcontract most required work to AKT (field sampling, data review, and reporting); however, the following additional Tetra Tech START personnel (not included in the original QAPP) will be conducting work:

- David Franc (project manager, responsible for project management and coordination with EPA)
- Lori Kozel, Sean Kane, Kelly Thomas, and Mike Browning (field technical staff, responsible for field oversight).

Their resumes were included in the Swayze QAPP Addendum. A Tetra Tech project-specific organization chart and resumes are in Attachment 2

AKT project staff will perform the following activities:

- LUST Closure and Due Care (soil, groundwater, and paint chip sampling), data validation, and reporting

- Hazardous materials inspection, sampling, and reporting.

The AKT personnel include:

- Anthony Kashat (principal)
- Robert Lambdin (director operations)
- Louis Stultz (group leader)
- Bret Stuntz (brownfields incentives coordinator)
- Timothy McGahey (project manager)
- Brett Shoaff (field team leader)
- Janet Michaluk (QA manager)
- Matthew Burmann, Jeremy Fox, Carl Rogers, and Thomas Szocinski (field staff).

An AKT project-specific organization chart and resumes are in Attachment 3. AKT-specific field SOPs and forms are in Attachments 4 and 5. Sample collection procedures (including QA/quality control [QC] information, bottle requirements, preservation, and holding times for each sample medium and analysis) are in Attachment 6.

Laboratory Certificates: AKT is subcontracting analytical services to Fibertec Inc., (Fibertec) and APEX Research Laboratories (APEX). The appropriate accreditations and expiration dates for these laboratories based on planned analyses are as follows:

Laboratory	Analyses	Accreditation and Expiration Date
Fibertec	PNAs, arsenic, and lead (soil, groundwater, and paint chips for lead only)	National Environmental Laboratory Accreditation Program (NELAP) (January 31, 2015)
APEX	Asbestos (bulk)	National Voluntary Laboratory Accreditation Program (NVLAP) (September 30, 2015)

A copy of each laboratory accreditation was included in the Swayze Apartments QAPP Addendum.

Laboratory Analyses: Fibertec will perform soil, groundwater, and paint chip analyses, and provide all sample containers (unpreserved and pre-preserved) for these media as listed in Attachment 6. APEX will conduct ACM sample analyses, and AKT will provide sample containers for this medium as listed in Attachment 6. All sample containers that require preservatives per the table in Attachment 6 will be supplied by the laboratory, with the preservatives already added (i.e, pre-preserved). Laboratory contact information and specific laboratory methods to be employed are as follows:

Laboratory	Address and Contact Information	Analytical Methods
Fibertec	Daryl Strandbergh Laboratory QA Manager 1914 Holloway Drive Holt, MI 48842 517-699-0345	PNAs (soil and groundwater) – EPA SW-846 Methods 3546/3510C/8270C Arsenic and Lead (soil, groundwater, and paint chips for lead only) – EPA SW-846 Methods

	dstrandbergh@fibertec.us	200.8-M/6020A
APEX	Robert Letarte Lab Director 11054 Hi Tech Drive Whitmore Lake, MI 48189 734-449-9990 apexresearch@chartermi.net	Asbestos – EPA 600-R/-93/116, EPA 600-M4-82-020, New York State (NYS) Environmental Laboratory Accreditation Program (ELAP) 198.1, ELAP 198.6, National Institute for Occupational Safety and Health (NIOSH) 9002

Method detection limits, laboratory reporting limits, precision and accuracy, and minimum required detection limits (per appropriate Michigan Department of Environmental Quality [MDEQ] criteria), current and signed QA manuals, chain of custody (COC) forms, applicable SOPs, and full certification documentation for each laboratory were submitted with the Swayze Apartments QAPP Addendum.

Once the data have been received and validated by the AKT QA manager, AKT will prepare a LUST closure documentation (if appropriate) or a Final Assessment report. AKT will also prepare a Due Care Plan to be used by the property owner.

AKT will also prepare a report indicating locations of all identified hazardous materials and results from any ACM and LBP sample analyses. The report will include information on the type and estimated volume, square footage, or linear footage of all hazardous materials identified. A remediation work plan to address any ACM, LBP, and hazardous materials present in the buildings will be included as an appendix to the report.

Each recipient of this document should place it and all attachments intact into the front of his/her copy of the QAPP.

Sincerely,



Dave Franc
Project Manager

Attachments (1 through 6)

cc: Brad Stimple, U.S. EPA Targeted Brownfields Assessment Coordinator, stimple.brad@epa.gov,
office: 440.250.1717
Janet Michaluk, AKT QA Manager, MichalukJ@AKTPeerless.com, (517) 231-0766
Daryl Strandbergh, Fibertec Laboratory QA Manager, dstrandbergh@fibertec.us, (517) 699-0345
Robert Letarte, APEX Lab Director, apexresearch@chartermi.net, (734) 449-9990


ATTACHMENTS

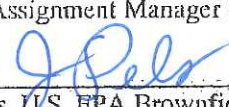
- Attachment 1: QAPP Addendum Approval Page
- Attachment 2: Project-specific Organization Chart
- Attachment 3: Project-specific Organization Chart and Resumes of AKT personnel
- Attachment 4: AKT SOPs
- Attachment 5: AKT Field Forms
- Attachment 6: Sample Collection Requirements (including QA/QC information), Bottle Requirements, Preservation, and Holding Times

ATTACHMENT 1
QUALITY ASSURANCE PROJECT PLAN ADDENDUM APPROVAL SHEET
(One Page)

QUALITY ASSURANCE PROJECT PLAN ADDENDUM APPROVAL SHEET
U.S. EPA TARGETED BROWNFIELDS ASSESSMENT PROJECT
(For Hazardous Substances and/or Petroleum)
Highland Park Model T Site, Highland Park, Wayne County, Michigan
Original QAPP Approval Date: July 15, 2014

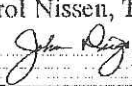
On behalf of the U.S. Environmental Protection Agency (U.S. EPA), this Quality Assurance Project Plan (QAPP) Addendum was prepared by Tetra Tech, Inc., (Tetra Tech) regarding the Region 5 Targeted Brownfields Assessment (TBA) Project. This QAPP Addendum includes investigative activities pertaining to the Highland Park Model T site, and incorporates applicable state standards, laboratory detection limits, laboratory quality assurance (QA) manuals, laboratory certifications, and standard operating procedures (SOP). The QAPP and QAPP Addendum were developed following the guidance presented in the U.S. EPA document QA/R-5 (dated March 2001, reissued May 2006).

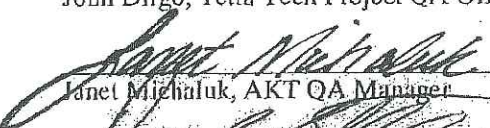

Brad Stimple, U.S. EPA TBA Coordinator/
Work Assignment Manager (WAM)

 10/30/14
Jan Pels, U.S. EPA Brownfields Program QA Reviewer

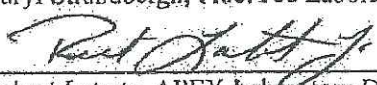

Carol Nissen
Digitally signed by Carol Nissen
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EM: carol.nissen@tetratech.com,
c=US
Date: 2014.11.04 09:11:49 -0500

Carol Nissen, Tetra Tech TBA Project Manager

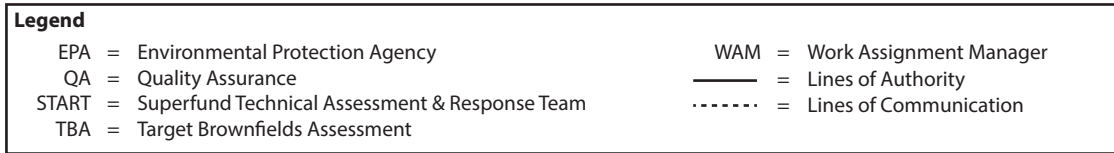

John Dirgo, Tetra Tech Project QA Officer


Janet Michaluk, AKT QA Manager

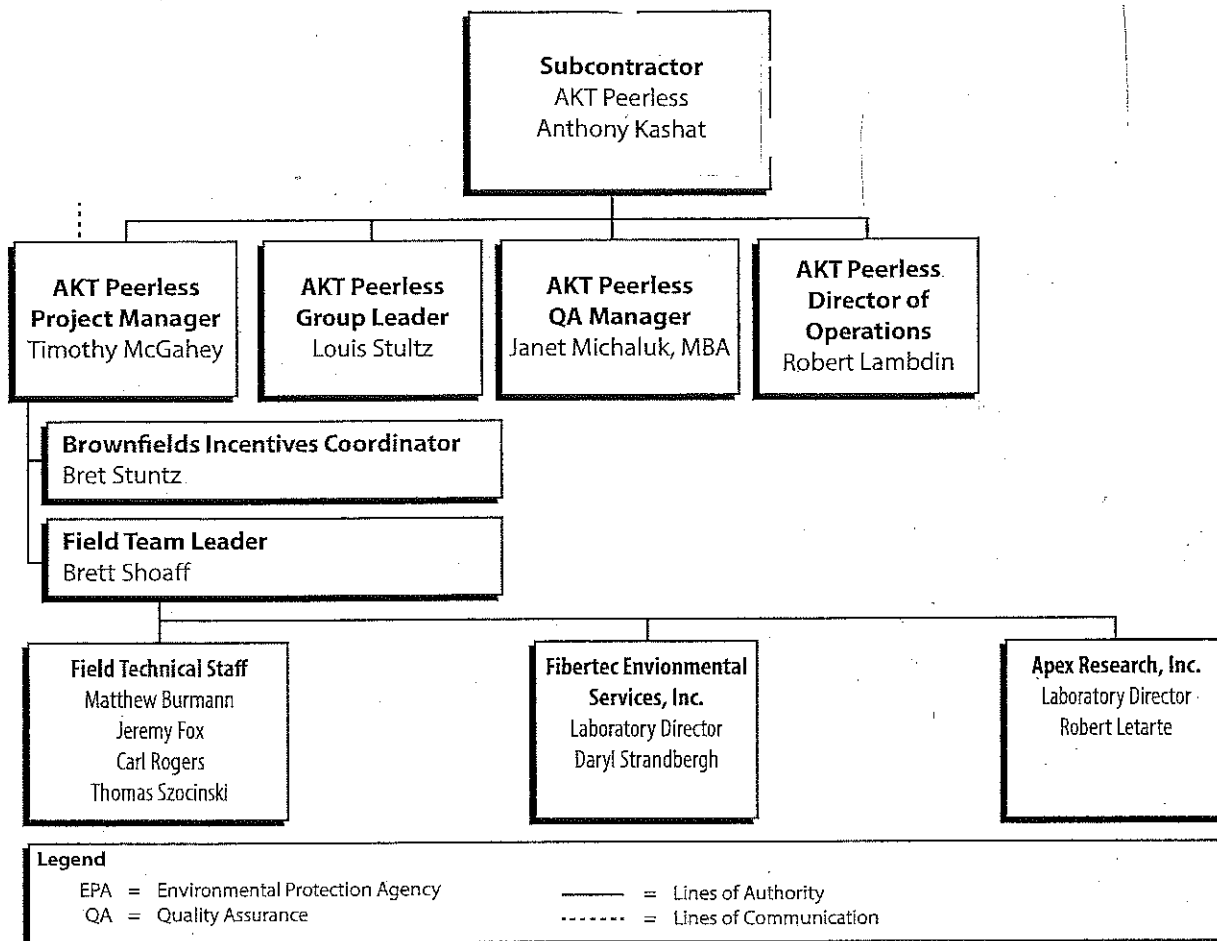

Daryl Strandbergh, FiberTec Laboratory QA Manager


Robert Letarte, APEX Laboratory Director

ATTACHMENT 2
PROJECT-SPECIFIC ORGANIZATION CHART
(One Page)



ATTACHMENT 3
PROJECT-SPECIFIC RESUMES OF AKT PERSONNEL AND AKT PROJECT-SPECIFIC
ORGANIZATION CHART
(18 Pages)



ATTACHMENT 4

**AKT SOPs
(84 Pages)**

ATTACHMENT 5
AKT FIELD FORMS
(14 Pages)

- **ACM Bulk Sample Log**
- **Low-Flow Sampling Log**
- **Boring Log**
- **Monitoring Well Log**
- **Functional Space Listing**
- **Homogenous Area Summary**
- **Lead-Based Paint Sampling Form**
- **Photographic Log**
- **Daily Field Report**
- **PID Calibration Record**
- **pH Meter Calibration Record**
- **Conductivity Meter Calibration Record**
- **Summary of PCB, Mercury, Lead, and Other Hazardous Building Components**
- **Subsurface Investigation Scope of Work**

ATTACHMENT 6
SAMPLE COLLECTION (INCLUDING QA/QC INFORMATION), BOTTLE
REQUIREMENTS, PRESERVATION, AND HOLDING TIMES
(One Page)

SAMPLE COLLECTION (INCLUDING QA/QC INFORMATION), BOTTLE REQUIREMENTS, PRESERVATION, AND HOLDING TIMES

Matrix	Parameter	Analytical Method^a	Volumes and Containers	Preservation	Holding Time^b
Groundwater	PAHs	EPA SW-846 3510C/8270C	One 1-liter Level 2 amber glass bottle	Cool to 4 °C	7 days for extraction; 40 days for analysis
	Arsenic and Lead	EPA SW-846 200.8/6020A	One 500-mL high density polyethylene bottle	To pH < 2 with nitric acid; cool to 4 °C	6 months
Soil	PAHs	EPA SW-846 3546/8270C	One 4-ounce glass jar	Cool to 4 °C	14 days for extraction; 40 days for analysis
	Arsenic and Lead	EPA SW-846 200.8/6020A	One 4-ounce glass jar	Cool to 4 °C	6 months
Paint Chips	Lead	EPA SW-846 6020A	One 4-ounce glass jar or 40 mL vial	Store at room temperature	None
Asbestos (Bulk)	Asbestos fibers	EPA 600-R/-93/116, EPA 600-M4-82-020, NYS ELAP 198.1, ELAP 198.6, NIOSH 9002	1 to 10 grams in a Ziploc bag	Store at room temperature	None

Notes:

a See Swayze Apartments QAPP Addendum Attachment 7 for reporting limits

b Holding time is measured from the time of sample collection to the time of sample extraction and analysis (unless otherwise noted)